

GUIDANCE OF INVASIVE MEDICAL DEVICES BY
HIGH RESOLUTION THREE DIMENSIONAL ULTRASONIC IMAGING

Abstract of the disclosure:

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A three dimensional ultrasonic diagnostic imaging system is operated to guide or observe the operation of an invasive medical device (30) in three dimensions. The appearance of the invasive device (30) in the three dimensional ultrasonic image is enhanced to be more readily observable by a clinician. The enhancement is produced
10 by transmitting a greater ultrasonic beam density in a subvolumetric region including the invasive device (30) than in the surrounding portion of the volumetric region (120). The beam density may be uniformly high in the subvolumetric region and uniformly low in the surrounding region, or may taper from a relatively high beam density around the invasive device (30) to a minimum beam density at distances removed from the
15 invasive device (30).